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- (e) wherein the light pulse detector comprises at least two light pulse detectors at separate points along a light pulse path in the light pulse transmission device with a first light pulse detector providing a light pulse detector initiation signal and a second providing a light pulse detector output signal and the counter is incrementally increased with a time difference between the first light pulse detector initiation signal and the second light pulse detector output signal.

a² 14 15. A light clock, comprising:

- (a) a light pulse transmission device having a light pulse source entry point;
- (b) a light pulse source for generating a light pulse onto the light pulse source entry point;
- (c) a light pulse amplifier within the closed loop for amplifying the light pulse;
- (d) a light pulse detector for detecting the light pulse within the closed loop and providing an output signal upon light pulse detection;
- (e) a counter which is incrementally increased upon receipt of the output signal of the light pulse detector; and
- (f) wherein the light pulse transmission device is a closed loop fiber optic cable of a known length and wherein the light clock further comprises a fiber optic tap/splitter as the light pulse source entry point.

Claims 24, 27, 28 and 29, please change "Claim 16 to -- Claim 15 --."

a³ 24 14. A light clock, as in Claim 15, wherein the light clock further comprises a fiber optic tap/splitter within the closed loop for splitting a portion of the light pulse in the closed loop fiber optic cable to the light pulse detector.

a⁴ 24 14. A light clock, as in Claim 15, wherein the light pulse source is a pulse laser.

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28. A light clock, as in Claim ¹⁴15, wherein the light pulse source is a pulsed laser having a wavelength of 1550 nanometers.

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29. A light clock, as in Claim ¹⁴15, wherein the light pulse amplifier comprises:

- (a) a first wavelength division multiplexing device having inputs of the light pulse from the closed loop fiber optic cable and an amplifying light to a combined output of the light pulse and the amplifying light;
- (b) a second wavelength division multiplexing device having an input of the combined light pulse and the amplifying light and outputs of the light pulse, now amplified, to the closed loop fiber optic cable and the amplifying light; and
- (c) a rare earth doped fiber optic cable connecting the output of the first wavelength division multiplexing device to the input of the second wavelength division multiplexing device.

REMARKS

Claims 1-13, 15, 17-22 and 24-32 are in the application, with claims 14, 16 and 23 having been cancelled and Claims 1, 15, 24, and 27-29 having been amended. Of the claims under consideration, claims 1 and 15 are the independent claims. Reconsideration and reexamination are respectfully requested.

Initially, Applicants wish to express their appreciation for the Examiner's indication of allowability of claims 14, 23-26 and 30. In response, Applicants have amended independent claims 1-15 to respectively include the subject matter of dependent claims 14 and 23, including all of the limitations of any intervening claims.

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